

S3Z

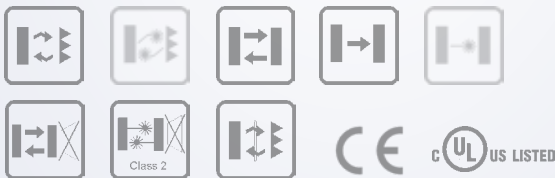
ADVANCED LINE OF MINIATURE GLOBAL STYLE OF PHOTOELECTRIC SENSORS



- 50-250 mm background suppression
- 0.7 m proximity, 150 mm with narrow beam
- 4 m polarized retroreflective
- 15 m through beam
- Light and dark trimmer models
- Standard 3-wire output configuration

APPLICATIONS

- Processing and Packaging machinery
- Electronics assembling
- Transportation lines, material handling
- Automatic warehouses
- Cosmetics and Pharmaceutical industry
- Small part detection with maximum accuracy

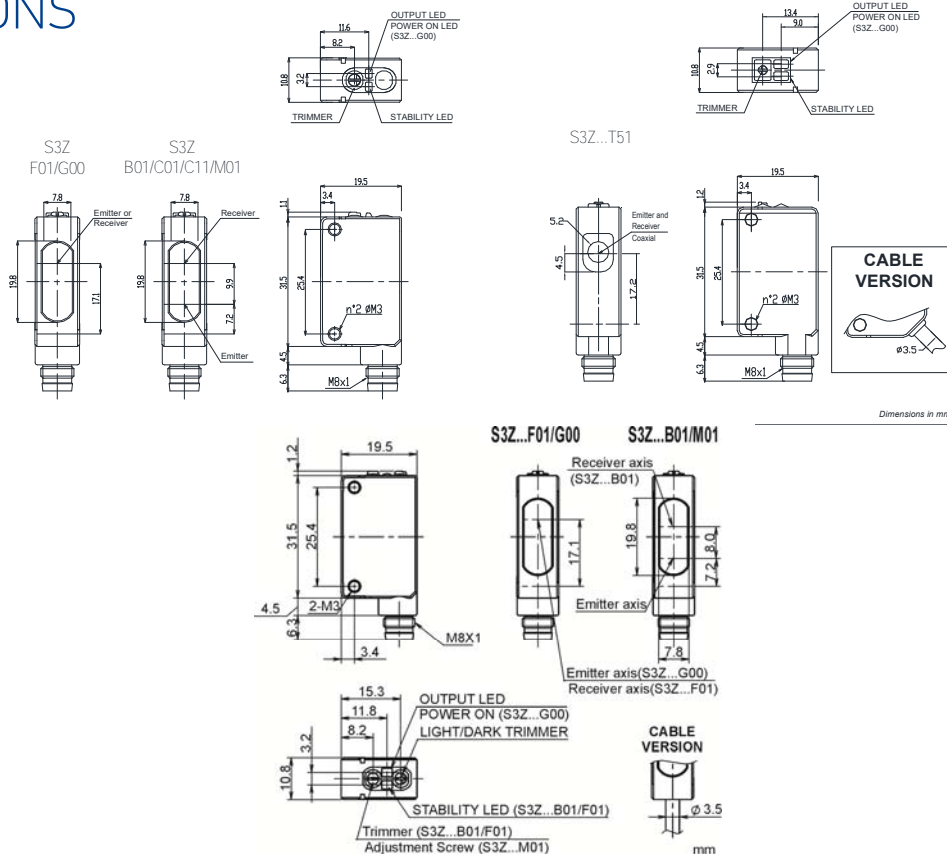


| S3Z | | |
|--|---|-----------|
| Through beam | 0...15 m 0...30 m (class 1 LASER) | |
| Polarized retroreflective | 0.05...4 m 0,3...10 m (class 1 LASER) | |
| Retroreflective for transparent (on R2 reflector) | 0...2 m | |
| Diffuse proximity | 0...700 mm | |
| Background suppression | 50...150 mm (narrow beam) 50...250 mm 40...300 mm (class 1 LASER) | |
| Power supply | Vdc | 10...30 V |
| | Vac | |
| | Vac/dc | |
| Output | PNP | • |
| | NPN | • |
| | NPN/PNP | |
| | relay | |
| | other | |
| Connection | cable | • |
| | connector | • |
| | pig-tail | |
| Approximate dimensions (mm) | 11x31x19 | |
| Housing material | PC/PBT | |
| Mechanical protection | IP67 | |

TECHNICAL DATA

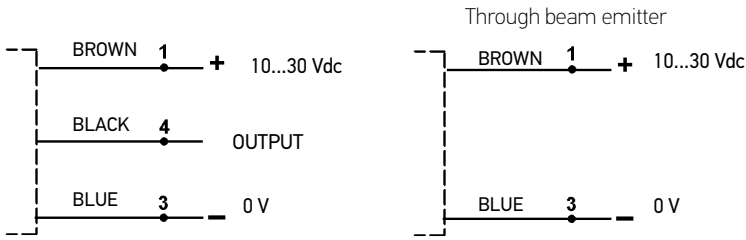
| | |
|--|--|
| Consumption (output current excluded) | 30 mA max. (LED mod.) 35 mA max. (Laser mod.) |
| Light emission | red LED 650 nm (mod. S3Z...T51) red LED 665 nm (mod. S3Z...B01/C01) red LED 670 nm (mod. S3Z...M01) IR LED 850 nm (mod. S3Z...C11) IR LED 870 nm (mod. S3Z...F01/G00) red Laser 650 nm (mod. S3Z...B01/F01/G00/M01) |
| Setting | sensitivity trimmer, 6 turns screw (mod. S3Z...M01), LIGHT/DARK trimmer model available (mod.S3Z...-PP, -NN) |
| Operating mode | LIGHT/DARK trimmer (Laser mod. S3Z...-PP, -NN), LIGHT (mod. S3Z...-PL, -NL), DARK (mod. S3Z...-PD, -ND) |
| Indicators | yellow OUTPUT LED, green STABILITY LED (mod. S3Z...B01/C01/C11/F01), POWER ON LED (mod. S3Z...G00) |
| Output | PNP or NPN (short circuit protection) |
| Output current | 100 mA max. |
| Saturation voltage | 2 V max. (LED mod.) 1,5 V max. (Laser mod.) |
| Response time | 1 ms max. (LED mod.) 250 µs max. (Laser mod.) |
| Switching frequency | 500 Hz max. (LED mod.) 2 kHz max. (Laser mod.) |
| Connection | 2 m cable Ø 3,5 mm, M8 4-pole connector |
| Dielectric strength | 500 Vac 1 min., between electronics and housing |
| Insulating resistance | >20 MΩ 500 Vdc, between electronics and housing |
| Mechanical protection | IP67 |
| Ambient light rejection | according to EN 60947-5-2 |
| Vibration | 0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6) |
| Shock resistance | 11 ms (30 G) 6 shock for every axis (EN60068-2-27) |
| Housing material | body PBT, indicators cover PC |
| Lens material | PMMA, PC (mod. S3Z...B01) |
| Operating temperature | -25 ... 55 °C (LED mod.), -10 ... 55 °C (Laser mod.) |
| Storage temperature | -40 ... 70 °C (LED mod.), -25 ... 70 °C (Laser mod.) |
| Weight | 50 g max. cable vers. , 10 g max. conn. vers. |

DIMENSIONS

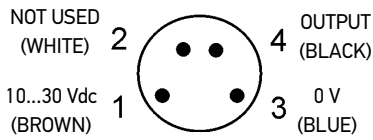


CONNECTIONS

CABLE

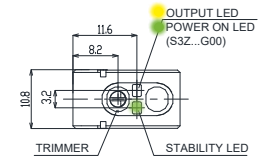


M8 CONNECTOR

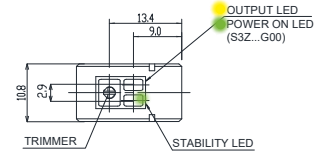


INDICATORS AND SETTINGS

S3Z...F01/G00/B01/C01/M01



S3Z...T51



S3Z...F01/G00/B01/M01/S3Z...-PP, -NN

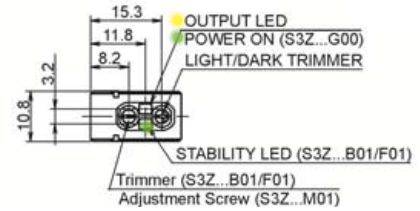
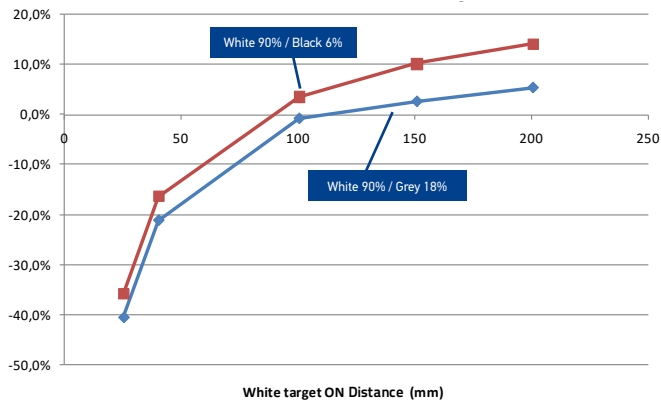
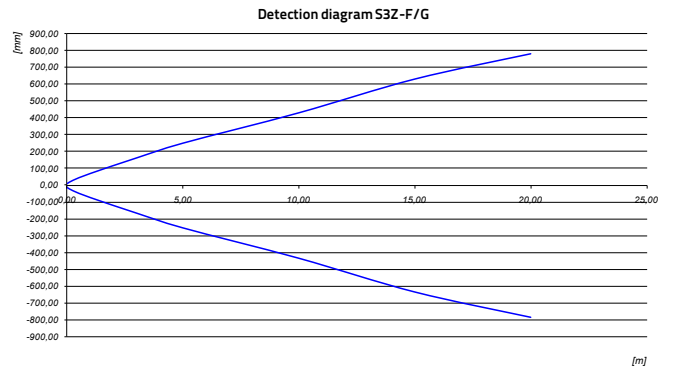


DIAGRAM LED MODELS

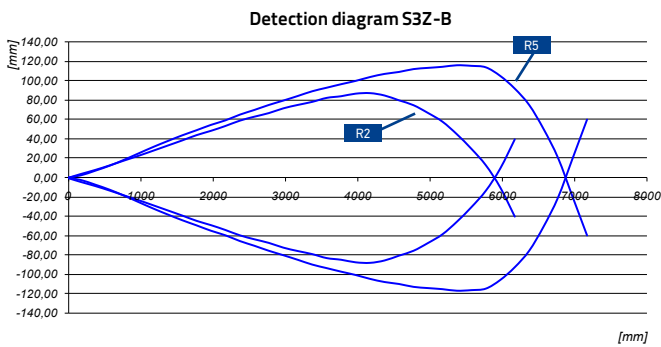
BACKGROUND SUPPRESSION - DISTANCE DIFFERENCE VS REFLECTANCE TARGET



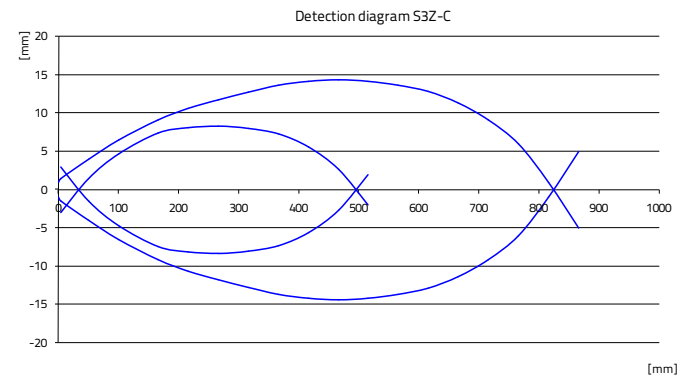
THROUGH BEAM - DETECTION AREA



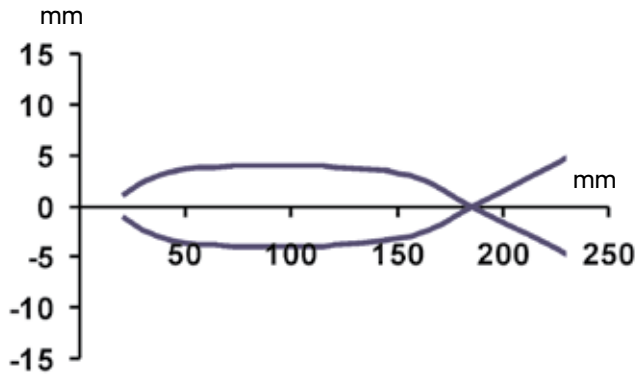
POLARIZED RETROREFLECTIVE - DETECTION AREA



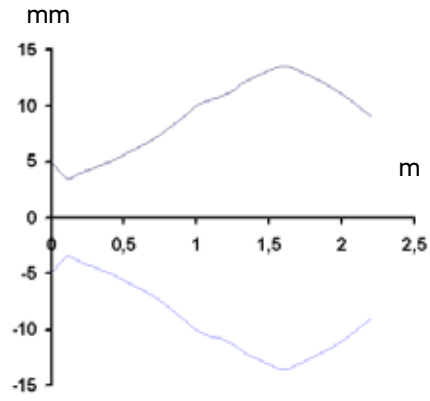
DIFFUSE PROXIMITY - DETECTION AREA



NARROW BEAM PROXIMITY - DETECTION AREA

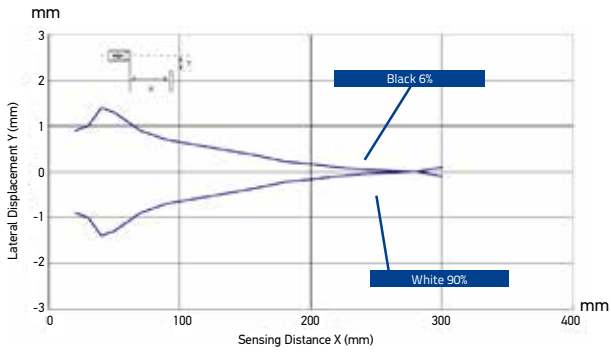


POLARIZED RETROREFLECTIVE FOR TRANSPARENT - DETECTION AREA

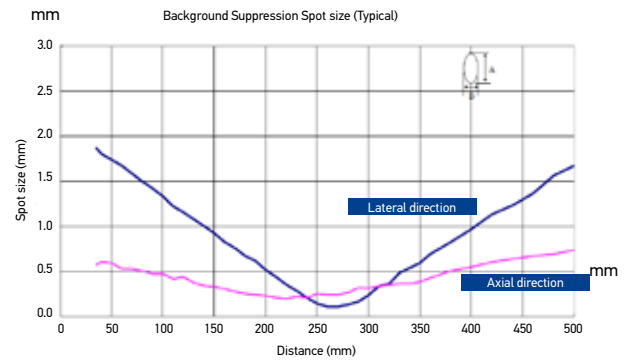


DIAGRAMS LASER MODELS

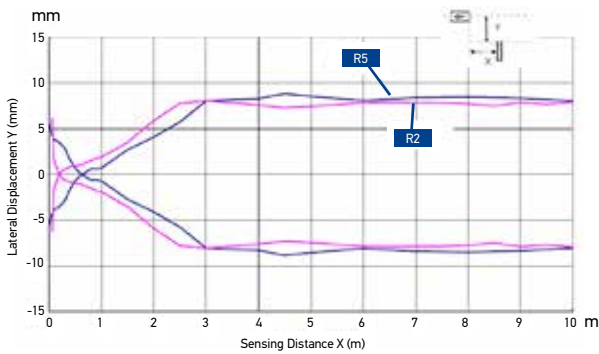
BACKGROUND SUPPRESSION - DETECTION AREA



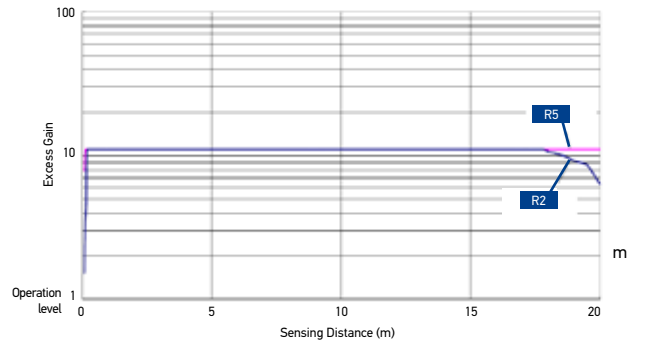
BACKGROUND SUPPRESSION - SPOT DIMENSION



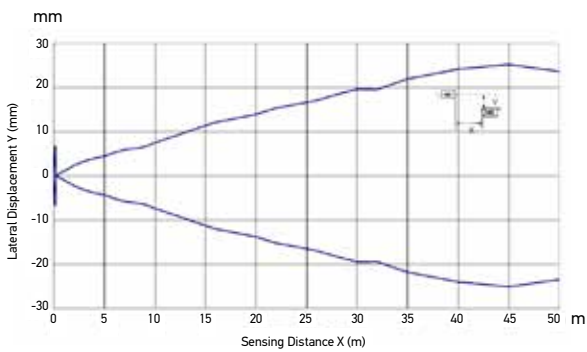
POLARIZED RETROREFLECTIVE - DETECTION AREA



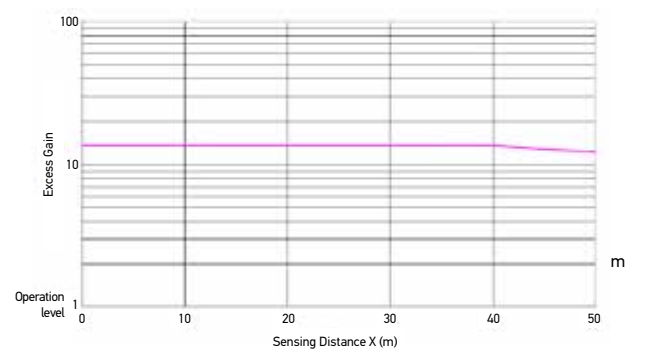
POLARIZED RETROREFLECTIVE - EXCESS GAIN



THROUGH BEAM - DETECTION AREA



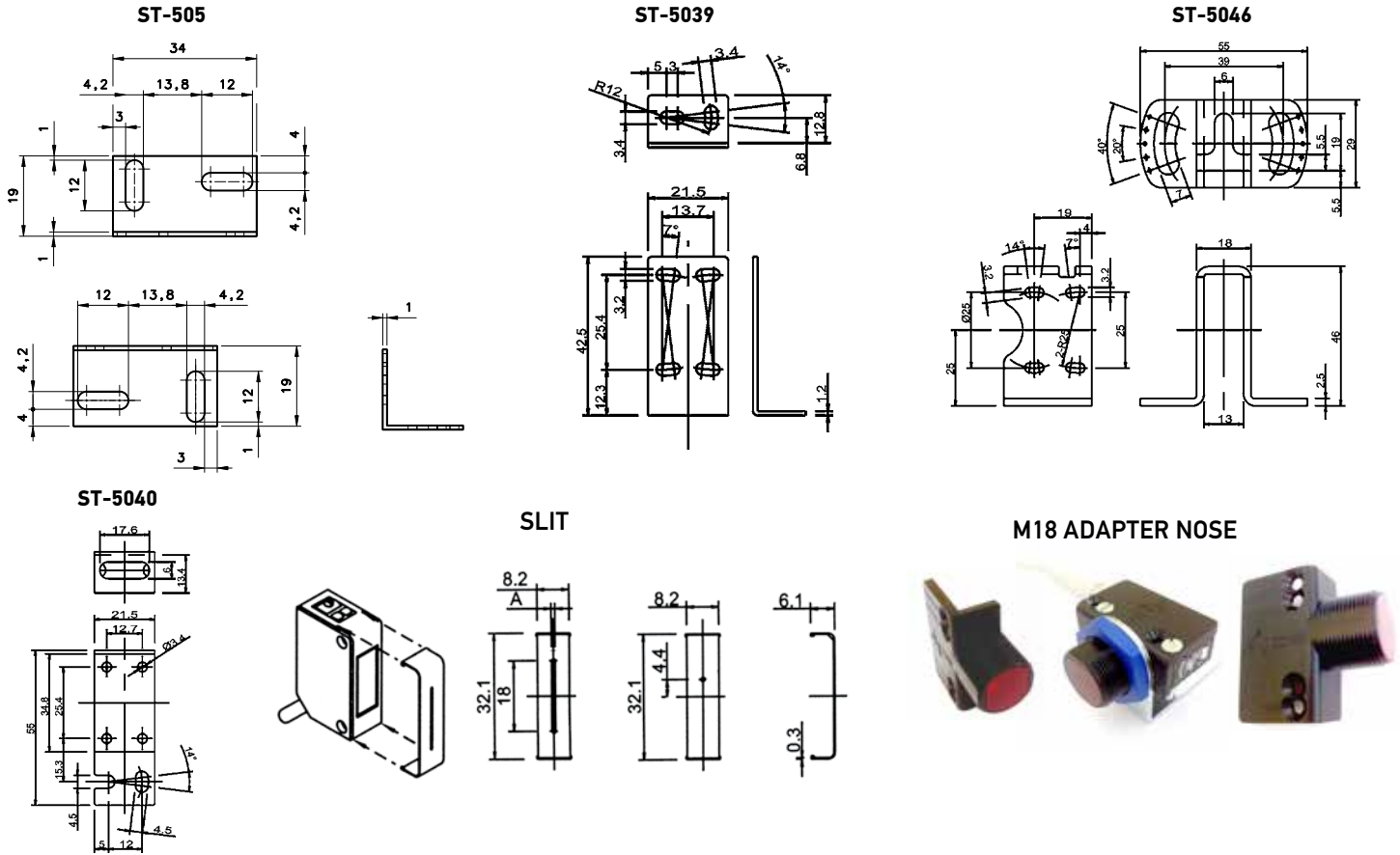
THROUGH BEAM - EXCESS GAIN



MODEL SELECTION AND ORDER INFORMATION

| OPTIC FUNCTION | EMISSION | CONNECTION | OUTPUT | MODEL | ORDER No. |
|---|------------------|-----------------|------------------|------------------|-----------|
| Narrow beam diffuse proximity | LED | 2 m Cable | PNP - LIGHT | S3Z-PR-2-C01-PL | 95B010040 |
| | | M8 Connector | PNP - LIGHT | S3Z-PR-5-C01-PL | 95B010050 |
| | | 2 m Cable | PNP - DARK | S3Z-PR-2-C01-PD | 95B010060 |
| | | M8 Connector | PNP - DARK | S3Z-PR-5-C01-PD | 95B010070 |
| | | 2 m Cable | NPN - LIGHT | S3Z-PR-2-C01-NL | 95B010200 |
| | | M8 Connector | NPN - LIGHT | S3Z-PR-5-C01-NL | 95B010210 |
| | | 2 m Cable | NPN - DARK | S3Z-PR-2-C01-ND | 95B010220 |
| | | M8 Connector | NPN - DARK | S3Z-PR-5-C01-ND | 95B010230 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PR-2-C01-PP | 95B010670 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PR-5-C01-PP | 95B010690 |
| | | 2 m Cable | NPN - LIGHT/DARK | S3Z-PR-2-C01-NN | 95B010660 |
| M8 Connector | NPN - LIGHT/DARK | S3Z-PR-5-C01-NN | 95B010680 | | |
| Long diffuse proximity | LED | 2 m Cable | PNP - LIGHT | S3Z-PR-2-C11-PL | 95B010001 |
| | | M8 Connector | PNP - LIGHT | S3Z-PR-5-C11-PL | 95B010011 |
| | | 2 m Cable | PNP - DARK | S3Z-PR-2-C11-PD | 95B010021 |
| | | M8 Connector | PNP - DARK | S3Z-PR-5-C11-PD | 95B010031 |
| | | 2 m Cable | NPN - LIGHT | S3Z-PR-2-C11-NL | 95B010161 |
| | | M8 Connector | NPN - LIGHT | S3Z-PR-5-C11-NL | 95B010171 |
| | | 2 m Cable | NPN - DARK | S3Z-PR-2-C11-ND | 95B010181 |
| | | M8 Connector | NPN - DARK | S3Z-PR-5-C11-ND | 95B010191 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PR-2-C11-PP | 95B010630 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PR-5-C11-PP | 95B010650 |
| | | 2 m Cable | NPN - LIGHT/DARK | S3Z-PR-2-C11-NN | 95B010620 |
| M8 Connector | NPN - LIGHT/DARK | S3Z-PR-5-C11-NN | 95B010640 | | |
| Polarized retroreflective | LED | 2 m Cable | PNP - LIGHT | S3Z-PR-2-B01-PL | 95B010081 |
| | | M8 Connector | PNP - LIGHT | S3Z-PR-5-B01-PL | 95B010091 |
| | | 2 m Cable | PNP - DARK | S3Z-PR-2-B01-PD | 95B010101 |
| | | M8 Connector | PNP - DARK | S3Z-PR-5-B01-PD | 95B010111 |
| | | 2 m Cable | NPN - LIGHT | S3Z-PR-2-B01-NL | 95B010241 |
| | | M8 Connector | NPN - LIGHT | S3Z-PR-5-B01-NL | 95B010251 |
| | | 2 m Cable | NPN - DARK | S3Z-PR-2-B01-ND | 95B010261 |
| | | M8 Connector | NPN - DARK | S3Z-PR-5-B01-ND | 95B010271 |
| | LASER | 2 m Cable | PNP - LIGHT/DARK | S3Z-PR-2-B01-PP | 95B010590 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PR-5-B01-PP | 95B010610 |
| | | 2 m Cable | NPN - LIGHT/DARK | S3Z-PR-2-B01-NN | 95B010580 |
| | | M8 Connector | NPN - LIGHT/DARK | S3Z-PR-5-B01-NN | 95B010600 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PH-2-B01-P | 95B010440 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PH-5-B01-P | 95B010460 |
| 2 m Cable | NPN - LIGHT/DARK | S3Z-PH-2-B01-N | 95B010450 | | |
| M8 Connector | NPN - LIGHT/DARK | S3Z-PH-5-B01-N | 95B010470 | | |
| Through beam | LED | 2 m Cable | PNP - LIGHT | S3Z-PR-2-FG01-PL | 95B010121 |
| | | M8 Connector | PNP - LIGHT | S3Z-PR-5-FG01-PL | 95B010131 |
| | | 2 m Cable | PNP - DARK | S3Z-PR-2-FG01-PD | 95B010141 |
| | | M8 Connector | PNP - DARK | S3Z-PR-5-FG01-PD | 95B010151 |
| | | 2 m Cable | NPN - LIGHT | S3Z-PR-2-FG01-NL | 95B010281 |
| | | M8 Connector | NPN - LIGHT | S3Z-PR-5-FG01-NL | 95B010291 |
| | | 2 m Cable | NPN - DARK | S3Z-PR-2-FG01-ND | 95B010301 |
| | | M8 Connector | NPN - DARK | S3Z-PR-5-FG01-ND | 95B010311 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PR-2-FG01-PP | 95B010710 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PR-5-FG01-PP | 95B010730 |
| | LASER | 2 m Cable | NPN - LIGHT/DARK | S3Z-PR-2-FG01-NN | 95B010700 |
| | | M8 Connector | NPN - LIGHT/DARK | S3Z-PR-5-FG01-NN | 95B010720 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PH-2-FG01-P | 95B010520 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PH-5-FG01-P | 95B010540 |
| 2 m Cable | NPN - LIGHT/DARK | S3Z-PH-2-FG01-N | 95B010530 | | |
| M8 Connector | NPN - LIGHT/DARK | S3Z-PH-5-FG01-N | 95B010550 | | |
| Background suPpression | LED | 2 m Cable | PNP - LIGHT | S3Z-PR-2-M01-PL | 95B010331 |
| | | M8 Connector | PNP - LIGHT | S3Z-PR-5-M01-PL | 95B010351 |
| | | 2 m Cable | NPN - LIGHT | S3Z-PR-2-M01-NL | 95B010321 |
| | | M8 Connector | NPN - LIGHT | S3Z-PR-5-M01-NL | 95B010341 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PR-2-M01-PP | 95B010750 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PR-5-M01-PP | 95B010770 |
| | LASER | 2 m Cable | NPN - LIGHT/DARK | S3Z-PR-2-M01-NN | 95B010740 |
| | | M8 Connector | NPN - LIGHT/DARK | S3Z-PR-5-M01-NN | 95B010760 |
| | | 2 m Cable | PNP - LIGHT/DARK | S3Z-PH-2-M01-P | 95B010480 |
| | | M8 Connector | PNP - LIGHT/DARK | S3Z-PH-5-M01-P | 95B010500 |
| 2 m Cable | NPN - LIGHT/DARK | S3Z-PH-2-M01-N | 95B010490 | | |
| M8 Connector | NPN - LIGHT/DARK | S3Z-PH-5-M01-N | 95B010510 | | |
| Polarized retroreflective for transparent | LED | 2 m Cable | NPN - DARK | S3Z-PR-2-T51-ND | 95B010390 |
| | | 2 m Cable | PNP - DARK | S3Z-PR-2-T51-PD | 95B010380 |
| | | M8 Connector | NPN - DARK | S3Z-PR-5-T51-ND | 95B010370 |
| | | M8 Connector | PNP - DARK | S3Z-PR-5-T51-PD | 95B010360 |

ACCESSORIES



MODEL SELECTION AND ORDER INFORMATION

| MODEL | DESCRIPTION | ORDER NO. |
|------------|---|-----------|
| ST-505 | lateral mounting | 95ACC2800 |
| ST-5039 | L-shaped fixing bracket | 95ACC2270 |
| ST-5040 | protection bracket with vertical fixing (only for cable versions) | 95ACC2280 |
| ST-5046 | protection bracket with horizontal fixing | 95ACC2370 |
| S3Z-SLIT1 | Ø 0,5 mm slit for through beam | 95ACC2470 |
| S3Z-SLIT2 | Ø 1 mm slit for through beam | 95ACC2480 |
| S3Z-SLIT3 | Ø 2 mm slit for through beam | 95ACC2490 |
| S3Z-SLIT4 | 0,5x18 mm slit for through beam | 95ACC2500 |
| S3Z-SLIT5 | 1x18 mm slit for through beam | 95ACC2510 |
| S3Z-SLIT6 | 2x18 mm slit for through beam | 95ACC2520 |
| ST-S3Z-M18 | S3Z FIX BRK M18 THREADED NOSE | 95ACC7850 |

CABLES

| TYPE | DESCRIPTION | LENGTH | MODEL | ORDER No. |
|---------------------|--------------------|--------|---------------|-----------|
| Axial M8 Connector | 4-pole, grey, PVC. | 3 m | CS-B1-02-G-03 | 95A251420 |
| | | 5 m | CS-B1-02-G-05 | 95A251430 |
| | | 7 m | CS-B1-02-G-07 | 95A251440 |
| | | 10 m | CS-B1-02-G-10 | 95A251480 |
| | | 2 m | CS-B1-02-R-02 | 95A251620 |
| Radial M8 Connector | 4-pole, grey, PVC. | 5 m | CS-B1-02-R-05 | 95A251640 |
| | | 3 m | CS-B2-02-G-03 | 95A251450 |
| | | 5 m | CS-B2-02-G-05 | 95A251460 |
| | | 7 m | CS-B2-02-G-07 | 95A251470 |
| | | 10 m | CS-B2-02-G-10 | 95A251530 |
| | 4-pole, PU.R. | 2 m | CS-B2-02-R-02 | 95A251630 |
| | | 3 m | CS-B2-02-R-03 | 95A251450 |
| | | 5 m | CS-B2-02-R-05 | 95A251640 |
| | | 7 m | CS-B2-02-R-07 | 95A251470 |
| | | 10 m | CS-B2-02-R-10 | 95A251650 |

DATALOGIC PRODUCT OFFERING



Rev. 03, 03/2019

The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products. Product and Company names and logos referenced may be either trademarks or registered trademarks of their respective companies. We reserve the right to make modifications and improvements.